

Rec'd PCT/PTO 10 DEC 2004

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number  
WO 03/107506 A2

- (51) International Patent Classification<sup>7</sup>: **H02J 7/00**
- (21) International Application Number: PCT/IB03/02383
- (22) International Filing Date: 4 June 2003 (04.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
02077382.6 14 June 2002 (14.06.2002) EP
- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **VAN BEEK, Johann, R., G., C., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **NOTTEN, Petrus, H., L.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: **ROLFES, Johannes, G., A.**; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: CHARGER FOR RECHARGEABLE BATTERIES

(57) **Abstract:** A battery charger for charging rechargeable batteries and/or battery packs is disclosed. Preferably the charger can apply two modes of charging a battery. In a normal charging mode a battery is charged to full capacity at a low rate. In a boost charging mode the battery is charged very rapidly and preferably only to a certain degree, such as 75% of its maximum capacity. The boost charging mode makes it possible to provide some charge to the battery when the time available for charging is limited. The boost charging method is based on a very high initial charging current ( $I_{init}$ ). The initial current ( $I_{init}$ ) is such that a predetermined maximum charging voltage ( $V_{max}$ ) is reached almost immediately. The charging current is then decreased in such a way that the charging voltage ( $V_{charge}$ ) is maintained substantially constant at the maximum charging voltage ( $V_{max}$ ).